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APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

FIFTH SEMESTER B. TECH (HONOURS) DEGREE EXAMINATION, DECEMBER 2017

Course Code: CH361

Course Name: ENERGY ENGINEERING (CH)

Max. Marks: 100 Duration: 3 Hours

PART A

Answer any two full questions, each carries 15 marks. Marks

1	a)	Describe the non-renewable sources of energy.	(7)
	b)	Discuss the merits and demerits of thermal and hydel power plants.	(8)
2	a)	What are the various sources of energy? Give an account of energy resources in India.	(7)
	b)	Explain with a neat sketch the working of nuclear power plants. Discuss the advantages and disadvantages.	(8)
3	a)	List out the important factors to be considered for selection of site for power plants.	(3)
	b)	Draw a schematic diagram of thermal power plant and explain the operation.	(6)
	c)	Write a short note on energy crisis.	(6)

PART B

Answer any two full questions, each carries 15 marks.

4	a)	Explain the different types of solar collectors.	(8)
	b)	Explain the thermochemical methods of bio-mass conversion.	(7)
5	a)	Explain how solar energy is used for space heating and water heating.	(8)
	b)	Explain in detail the various methods available to obtain energy from geothermal sources.	(7)
6	a)	State principle of solar distillation.	(5)
	b)	What are the advantages and limitations of tidal power plants?	(5)
	(c)	What is the principle of Ocean thermal energy conversion.	(5)

PART C

Answer any two full questions, each carries 20 marks.

7	a)	Explain in detail about Alkaline Fuel cell and molten carbonate fuel cell with neat diagram.	(10)
	b)	Explain in detail about energy conservation in Boilers and dryers.	(10)
8	a)	What is a fuel cell? Explain any one fuel cell with a neat diagram.	(10)
	b)	Write in detail about Preliminary and detailed Energy auditing.	(10)
9	a)	Explain the classification of MHD systems with the help of neat diagram.	(10)
	b)	Illustrate about the energy Conservation in Fertilizer industries with neat sketch.	(10)

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